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ABSTRACT

Nine research studies are reviewed on specific aspects of teaching outdoor education. Study results suggest instruments useful in establishing school district norms for determining an environmental education program (Horn, 1977); use of the outdoors as an effective educational tool (Peck, 1975); better preservice elementary education courses emphasizing outdoor education methods and a need for inservice programs offered by outdoor education specialists (Mirka, 1973); and preparation of preservice teachers should include use of outdoor education, connection between outdoors and school curriculum, and use of the outdoors as a laboratory (Hammerman and Hammerman, 1973). Other findings recommend: an inservice program in environmental science to increase understanding of scientific principles and attitudes of elementary teachers (Hulleman, 1972); all second year preservice elementary teachers be given an interdisciplinary program (Kalla, 1972); and the outdoors be used as a classroom and laboratory when possible and appropriate (Chrouser, 1970). Another study discusses the Outdoor Education Inventory, developed by Craig Chase in 1969, as an effective tool for evaluating inservice outdoor education programs. Finally, a survey of 50 colleges and universities in the western United States, conducted in 1967 by Raymond Rhead, revealed a lack of research in teacher preparation in outdoor education and most materials available in outdoor education had been published from 1962 to 1967. (ERB)

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A SURVEY REVIEW OF STUDIES ON SPECIFIC ASPECTS OF TEACHING OUTDOOR EDUCATION

by

J. Thomas Morrisey

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Canada

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A Survey Review of Studies on Specific Aspects of Teaching Outdoor Education

A study by Horn (1977) investigated the practicality of employing five instruments to collect enough information to enable one to plan an inservice program in environmental education for the teachers in an elementary school. Thirty elementary teachers taking an environmental education course at the University of Oregon formed the study group. The first four instruments were used to collect information on the teacher's past environmental practices. This information was used to help these same teachers identify those aspects of environmental education. It was determined that the instruments would be useful in establishing school district norms for an environmental education program.

Peck (1975) conducted a study which involved teaching identified cognitive and affective objectives inside classrooms, outside classrooms and not using any school facilities, plus a mixture of indoor and outdoor settings. The three experimental groups were composed of high school biology students. Pre - and post-tests on cognitive and affective objectives were completed. All groups improved their mean post-test scores on the cognitive test but only the outdoor group's scores exhibited a great improvement. The mean for the affective post-test scores revealed a move toward a more

positive attitude with respect to the environment for both the outdoor and indoor groups. The affective results for the combined group indicated a slightly negative move in the mean. The general results of this study indicate that it is possible to use the outdoors as an effective educational tool. An unexpected result of taking students outdoors was the supportive statements for outdoor work from students, parents and teachers.

The study by Mirka (1973) attempted to determine those factors that influence teachers to use, or not use, the outdoors as a way of teaching. He selected his population from the elementary schools in Parma Public Schools because all of the chosen school sites had an equal potential for conducting outdoor education activities. The teachers were asked to rank, from most to least important, ten items from a pre-selected twenty-four item list. The sample was categorized into two large groups, those who had used the outdoors and those who had not. The results of this study indicated a need for better preservice elementary education courses which emphasize outdoor education methods and a need for inservice programs offered by outdoor education specialists. The content of both programs should include: the subject matter that is relevant to teaching outdoors; the analysis of what is available on a school site for use in teaching outdoors; how to plan for and conduct outdoor activities; and, the development of guides and selection of related materials for teaching outdoors.

According to Hammerman and Hammerman (1973) the professional preparation of preservice teachers should be concerned primarily with these three areas: the use of outdoor education to make learning more effective and efficient; the connections between the outdoors and the school curriculum; and, the use of the outdoors as a laboratory for teaching the practical aspects of living and learning. A course in outdoor education for preservice teachers would give them more insight into the natural environment, the learning process, and the child as a learner. Such a course that included a practicum would prepare the student teacher to put into practice the outdoor education theory taught.

Hulleman (1972) tried to determine whether any changes would occur in the achievement and attitudes of elementary teachers after completing an inservice program in environmental science. A sample of fifty first, third and fifth grade teachers were randomly selected; twenty-five as the control group and twenty-five as the experimental group. The experimental group were given three one-half day training sessions on finding appropriate field study activities as well as going on brief field trips. This was followed by field trips for these teachers and their students. Information was collected on the personal and academic characteristics, of grade level taught, age, experience, and formal science training, for both groups. All subjects completed pre- and post-tests on science knowledge and attitudes toward certain environmental management concepts. Although the control group

scored higher on science knowledge there were no significant differences between the groups on their understanding of scientific principles. The experimental group scored higher on the attitude measures but both groups showed significant gains in the post-test.

A study by Kalla (1972) involved seventy-six 2nd year pre-service elementary teachers; a class of thirty-nine as the control group and a class of thirty-seven as the experimental group. He was trying to measure the effect an experimental, interdisciplinary, outdoor education program would have on student teachers' attitudes and values. The experimental group was subjected to a four-day off-campus, interdisciplinary, outdoor education experience. Both groups completed a pre-test and two post-tests of the author's Educational Attitude Index which dealt with the structure of educational experiences, the learning environment, the relationship between students, and the relationship between the teacher and his or her students. The experimental group exhibited significantly favorable changes in student teachers' attitudes on all scales except for that scale dealing with student-to-student relationships. On the strength of the results of this study, the author recommended that all second year preservice elementary teachers on the Regina campus of the University of Saskatchewan be given the interdisciplinary program.

Chrouser (1970) investigated and compared the effects of an outdoor laboratory versus the conventional indoor laboratory techniques in teaching biology to prospective elementary

teachers. Students enrolled in the biology course for elementary teachers at Colorado State College formed the sample. The class was divided into an outdoor and an indoor group, with both groups completing the following pre-and post-tests: The Test on the Social Aspects of Science; Methods and Procedures of Science: An Examination; The Watson-Glasser Critical Thinking Appraisal; and, Understanding of Selected Biological Principles: An Examination. Significant positive differences (for the outdoor group) between the two groups was revealed by an analysis of scores on Test on the Social Aspects of Science, in the specific biological principles involved in the laboratory activities, and in the understanding of science as a process. The results of the study encouraged the author to recommend that the outdoors be used as a classroom and a laboratory when possible and appropriate.

The study by Craig (1969) attempted to identify changes in attitude of elementary teachers and school administrators toward the usefulness of outdoor education in achieving academic goals. The author was also attempting to develop an evaluation instrument to measure the success of the Cooperative Outdoor Education Project in which the sampled teachers and administrators were involved. The teachers and the administrators of the elementary schools in five school districts were given pre-and-post tests of the Outdoor Education Inventory at the start and end of the school year respectively. The results of this study showed a significant

positive change in attitude toward outdoor education by the sample when grouped as teachers and administrators. When the sample was grouped according to role, education, experience, and sex, all groups exhibited a significant positive change in attitude toward outdoor education. This is also true for the administrative staffs of three of the districts and teaching staffs of eighteen of the twenty-three schools involved in the study. The author felt that the instrument he developed is an effective tool for evaluating the effectiveness of an inservice outdoor education program. The Outdoor Education Inventory used was considered by the author to be the major strength of this study.

The results of a study conducted by Rhead (1967) to develop a proposed interdisciplinary approach to outdoor education revealed that an outdoor education program was adaptable to almost any phase of education. Rhead's survey of fifty colleges and universities in the western United States also reavealed a definite lack of research in the area of teacher preparation for outdoor education in these institutions and that most of the materials available in outdoor education had been published in the last five years prior to this study.

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